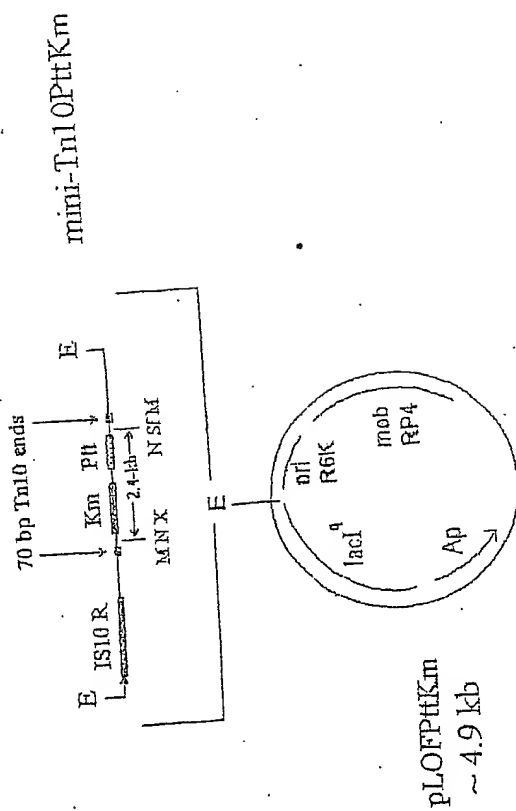


FIGURE 1



TRANSPOSON

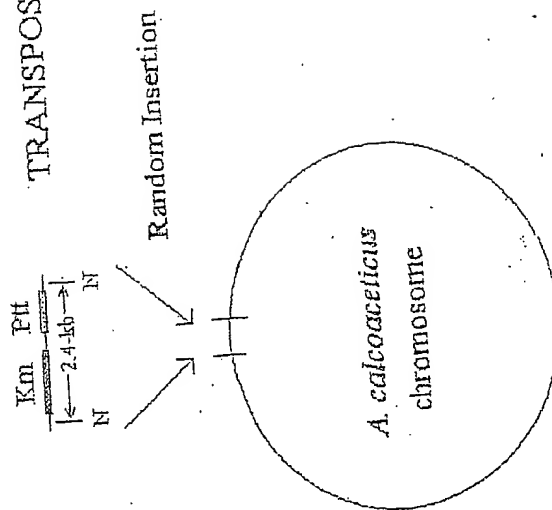


FIGURE 2

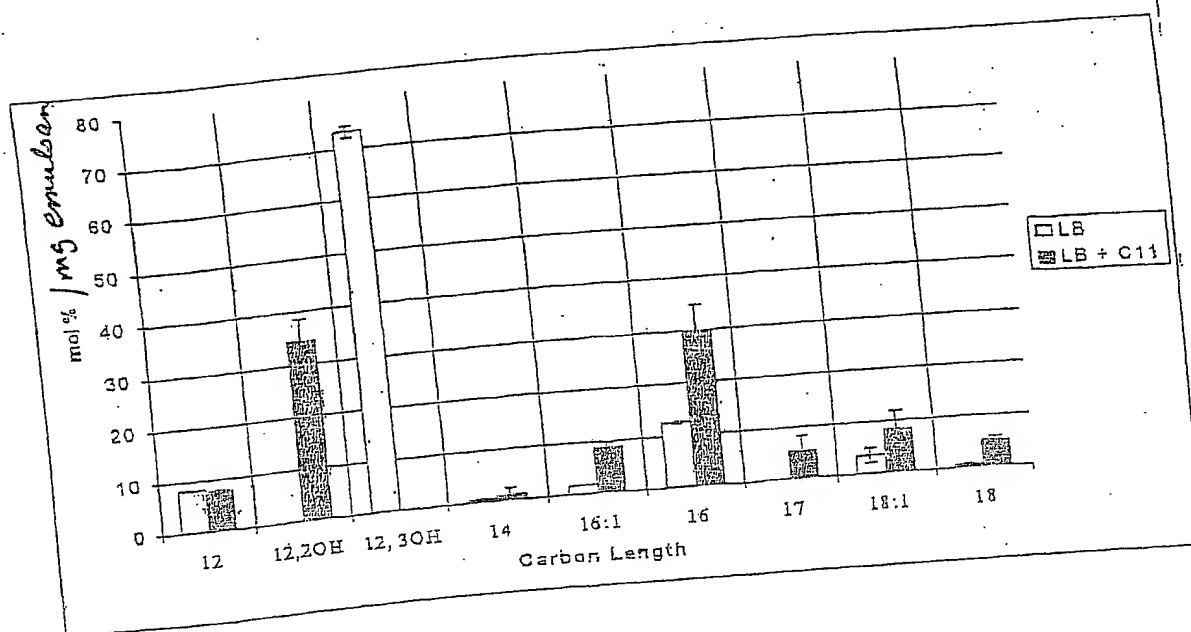


FIGURE 3A

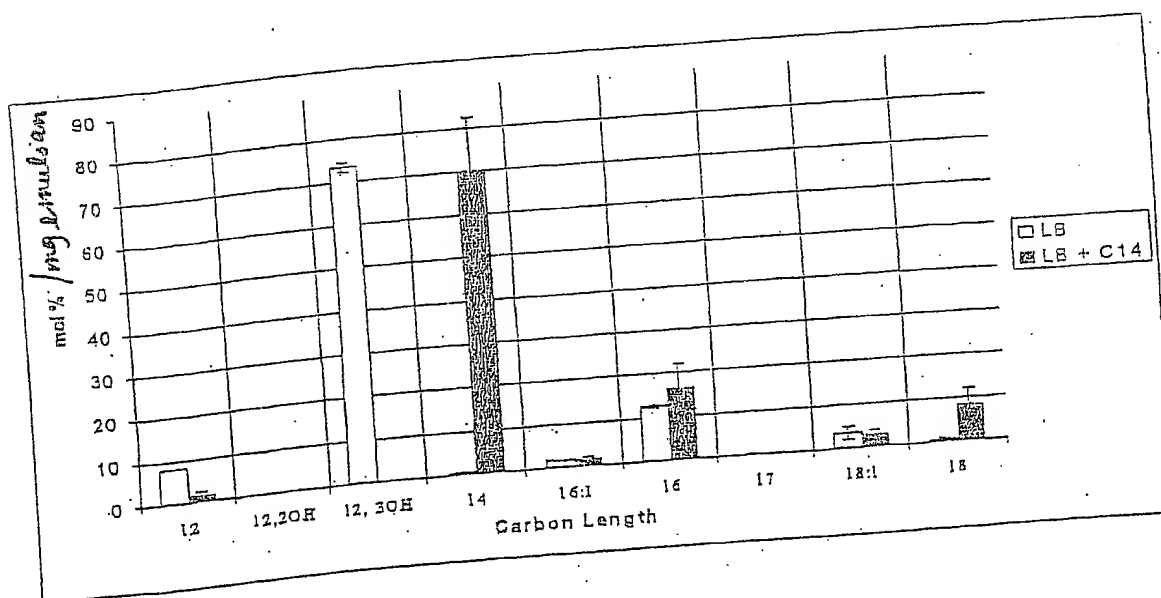


FIGURE 3B

Carbon Source	Emulsification Activity in Klett Units		
	Hexadecane (C16)	Tetradecane (C14)	Dodecane (C12)
LB	15 ± 2	12 ± 0	18 ± 3
LB + C11	11 ± 1	8 ± 0	5 ± 0
LB + C14	343 ± 11	208 ± 25	163 ± 95
LB + C16	100 ± 20	5 ± 1	0
LB + C18	145 ± 40	275 ± 30	100 ± 31

FIGURE 4A

Carbon Source	Emulsification Activity in Klett Units		
	Hexadecane (C16)	Tetradecane (C14)	Dodecane (C12)
LB	5 ± 0	0 ± 0	5 ± 0
LB + C11	20 ± 0	5 ± 0	0 ± 0
LB + C14	0	0	0
LB + C16	75 ± 7	5 ± 1	0
LB + C18	235 ± 25	140 ± 20	52 ± 18

FIGURE 4B

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A bar graph showing the release of pg TNF per 100,000 cells for two sample types: Crude (white bars) and Deproteinized (hatched bars). The y-axis ranges from 0 to 4000. The x-axis shows six conditions: Medium, 100 ng/ml LPS, 2 ug/ml EM7, 200 ng/ml EM7, 20 ng/ml EM7, and 2 ng/ml EM7. Error bars are present on all bars. A triangle symbol is placed above the 2 ng/ml EM7 bars.

Condition	Crude (pg TNF/100,000 cells)	Deproteinized (pg TNF/100,000 cells)
Medium	~2550	~3150
100 ng/ml LPS	~3000	~3000
2 ug/ml EM7	~2450	~3150
200 ng/ml EM7	~2350	~3550
20 ng/ml EM7	~1250	~2350
2 ng/ml EM7	~1250	~2350

Condition	pg TNF Released per 80,000 Cells	Significance
Medium	~120	
200 ng/ml EM1	~1450	B
20 ng/ml EM1	~1100	
2 ng/ml EM1	~280	

FIGURE 5B

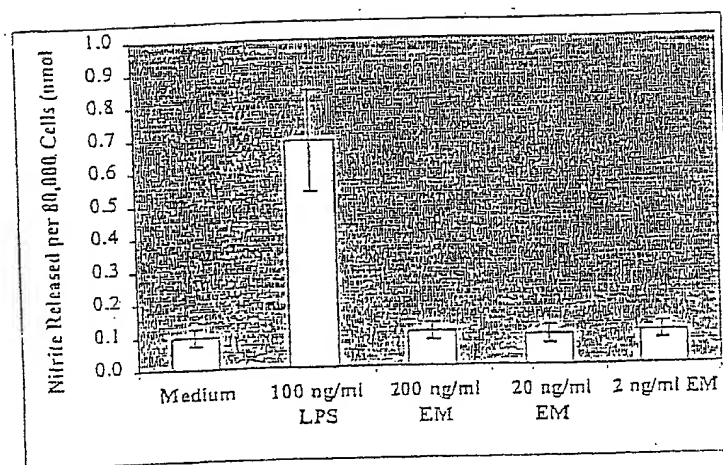


FIGURE 6

A bar graph comparing the release of TNF (pg TNF Released per 100,000 Cells) from HeNC2 Cells (dark bars) and GG2EE Cells (light bars) under various conditions. The y-axis ranges from 0 to 800. The x-axis lists conditions: 1 ug/ml EM, 200 ng/ml EM, 40 ng/ml EM, 1 ug/ml SL, 200 ng/ml SL, 40 ng/ml SL, 1 ug/ml C2, 200 ng/ml C2, 40 ng/ml C2, 1 ug/ml Ac, 200 ng/ml Ac, and 40 ng/ml Ac. HeNC2 cells show significantly higher TNF release than GG2EE cells in all conditions, with the highest release observed in the 1 ug/ml EM condition.

Condition	HeNC2 Cells (pg TNF Released per 100,000 Cells)	GG2EE Cells (pg TNF Released per 100,000 Cells)
1 ug/ml EM	~750	~250
200 ng/ml EM	~550	~250
40 ng/ml EM	~550	~250
1 ug/ml SL	~250	~100
200 ng/ml SL	~250	~100
40 ng/ml SL	~250	~100
1 ug/ml C2	~50	~20
200 ng/ml C2	~50	~20
40 ng/ml C2	~50	~20
1 ug/ml Ac	~50	~20
200 ng/ml Ac	~50	~20
40 ng/ml Ac	~50	~20

A bar graph showing the release of TNF (pg TNF Released per 100,000 Cells) in response to LPS concentrations (100 ng/ml, 10 ng/ml, 1 ng/ml, and 0.1 ng/ml) for three cell lines: HeNC2 (hatched bars), GG2EE (white bars), and B (black bars). The y-axis ranges from 0 to 3000 pg TNF Released per 100,000 Cells. The x-axis shows LPS concentrations. HeNC2 cells show the highest response, followed by B cells, and then GG2EE cells. The response decreases as LPS concentration decreases.

LPS Concentration	HeNC2 (pg TNF Released per 100,000 Cells)	GG2EE (pg TNF Released per 100,000 Cells)	B (pg TNF Released per 100,000 Cells)
100 ng/ml	~2800	~950	~2850
10 ng/ml	~2850	~350	~1100
1 ng/ml	~250	~200	~300
0.1 ng/ml	~250	~200	~250

FIGURE 7B

ELISA code	EM1	EM4	EM5	EM6	EM7	EM8	EM9	EM10
A. <i>calcoaticus</i> strain and culture conditions	RAG-1 on Ethanol	M2 (13D) on C14 saturated	M1 (52D) on C14 saturated	RAG-1 on C15 saturated	RAG-1 on C16 unsaturated	RAG-1 on C17 saturated	RAG-1 on C18 saturated	RAG-1 on C20 saturated
	Fatty acid content (nmol/mg Emulsan)	Fatty acid content (nmol/mg Emulsan)	Fatty acid content (nmol/mg Emulsan)	Fatty acid content (nmol/mg Emulsan)	Fatty acid content (nmol/mg Emulsan)	Fatty acid content (nmol/mg Emulsan)	Fatty acid content (nmol/mg Emulsan)	Fatty acid content (nmol/mg Emulsan)
C12:0	22.65	0.10	2.53	5.91	14.57	9.59	8.26	12.18
C12 (2OH)	58.03		44.68	22.53	19.17	38.99	58.88	38.69
C12 (3OH)	118.41		8.69	46.99	86.75	17.10	99.05	56.13
C14:0		6.15	4.75	1.09		0.89	1.07	1.18
C15:0				5.61		2.81	2.62	
C16:1	8.92	0.08	8.21		17.64	1.59		2.38
C16:0	46.25	1.23	11.35	2.14		4.42	2.25	6.60
C17:0						37.66		
C18:1	11.17	0.25	0.05			0.85		1.66
C18:0	4.62	0.66	0.27	9.01		2.35	3.15	
total	270.06	8.46	80.53	106.31	138.13	117.43	179.06	120.19

FIGURE 8

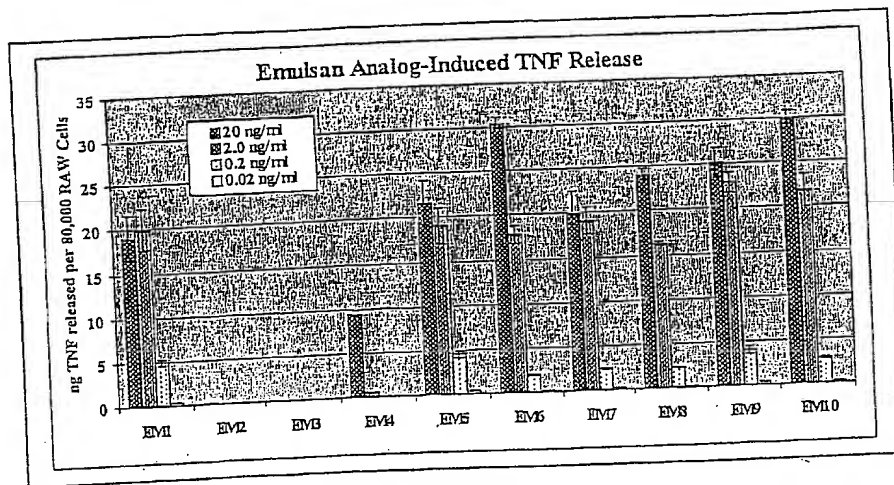


FIGURE 9A

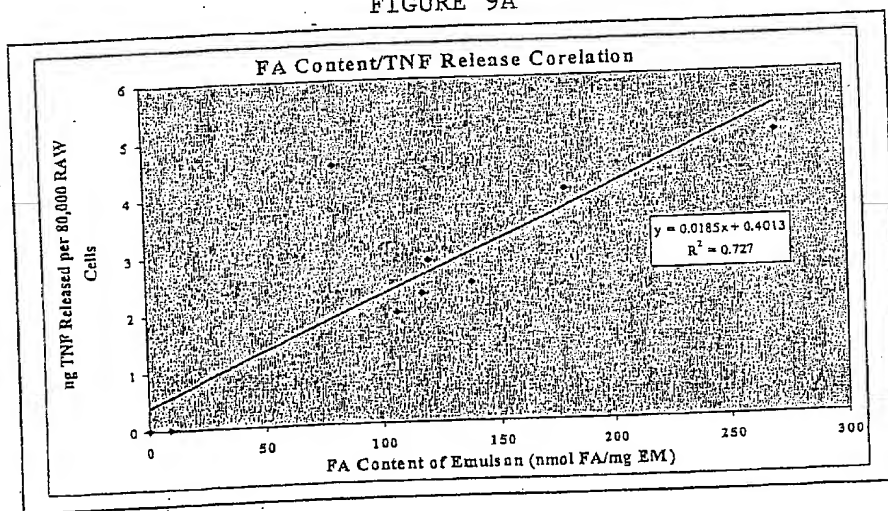


FIGURE 9B

Treatment	Antiserum Dilution 100(S)
Ag Alone	~3.0
EM Alone	~0.5
Dp-EM Alone	~0.8
EM (Low) & Ag	~4.6
EM (High) & Ag	~4.3
Dp-EM (Low) & Ag	~4.7
Dp-EM (High) & Ag	~5.2
CF/FA & Ag	~5.5

Antigen Preparation	Antiserum Dilution 100(5%)
Ag Alone	~0.4
EM Alone	~0.2
Dp-EM Alone	~0.2
EM (Low) & Ag	~3.3
EM (High) & Ag	~3.9
Dp-EM (Low) & Ag	~3.3
Dp-EM (High) & Ag	~3.8
CFA/IFA & Ag	~3.6

FIGURE 11B

005050" 02081650

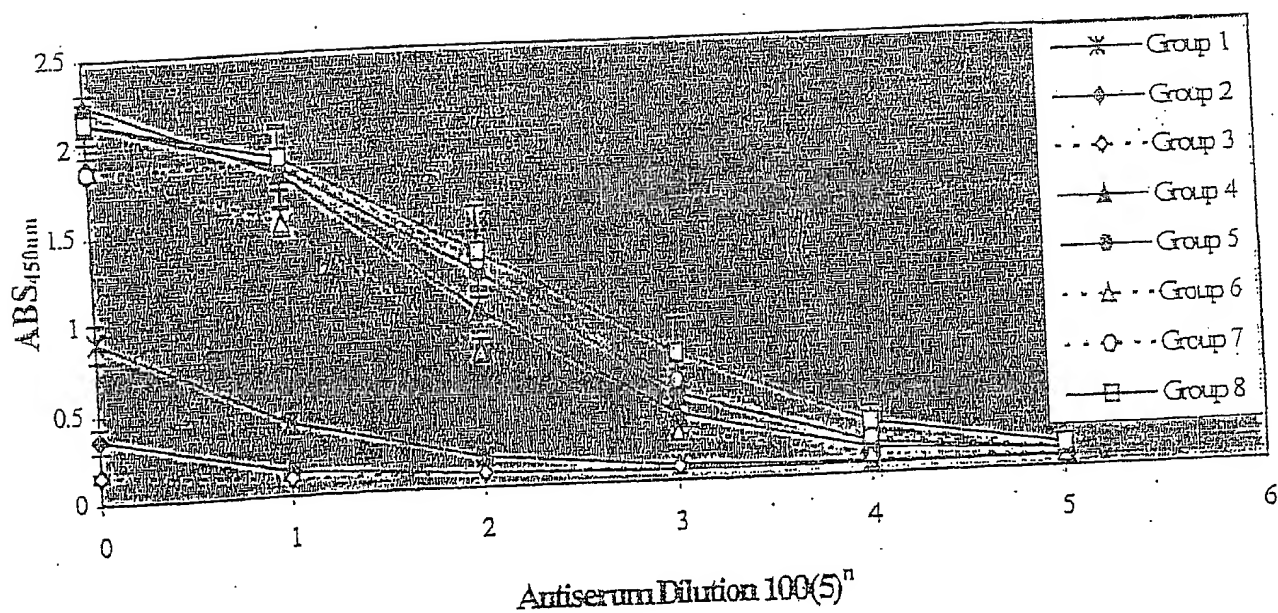


FIGURE 12